



## ARTICLE

# Connection and disconnection as predictors of mental health and wellbeing

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**Abstract:** Despite the established literature on connection to others, and burgeoning research on self-connection, researchers have paid little attention to the equivalent experiences of disconnection that people can experience in their everyday lives. The current research examined connection and disconnection from oneself and others. Specifically, across two studies, participants listed up to twenty words or phrases that they experienced related to each form of (dis)connection. Study 1 focused on how these affected participants' mental health (i.e. anxiety and depression), while study 2 examined positive forms of wellbeing (i.e., flourishing and life satisfaction). Results suggested that increased mental health was most strongly related to a greater experience of connection to others. Flourishing also increased as one's experience of other-connection increased. By contrast, poorer wellbeing was related to a greater experience of disconnection from others. Finally, life satisfaction decreased when participants experienced greater self-disconnection. In all, these findings provide an initial test of and support for the continued examination of various forms of both connection and disconnection.

**Keywords:** Self-Connection, Connection, Disconnection, Wellbeing, Mental Health

## Introduction

Support abounds for the importance of connecting with others (Brown, Nesse, Vinokur, & Smith, 2003; Chu, Saucier, & Hafner, 2010; Tronick, 2005). In addition, self-connection, a new concept in positive psychology, has also begun to receive support (Klussman, Curtin, Langer, & Nichols, 2020; Klussman, Nichols, Curtin, & Langer, 2020a; 2020b). In particular, significant and consistent relationships have emerged between it and several health and wellbeing indicators, including mindfulness, meaning in life, and positive affect. However, connection is just one of the things that people may experience when interacting with themselves and others. Similarly, despite significant research focused on forms of disconnection (e.g., loneliness; Eisenberger, 2011), sparse evidence exists for the effect of self-disconnection on health and wellbeing. This study attempts to build on and extend past research by comprehensively examining the relationships between health, wellbeing, and self/other (dis)connection.

## Connection to Others

Research highlights the importance of being connected to others (Tronick, 2005). Connection to others, often referred to in the literature as social support or belonging, includes factors such



as the provision or reception of resources to help people cope with stress, including physical aid, emotional support, and/or knowledge dissemination (Cohen, 2004). Baumeister and Leary (1995) assert that belonging is a fundamental human motivation. Relatedly, Heintzleman (2018) suggests that wellbeing arises from the fulfillment of basic psychological needs, including relatedness to others. As such, current operationalizations of connection in the literature suggest that it is both important and a significant predictor of wellbeing.

Both the giving of social support (altruism) and the reception of it often result in greater wellbeing and positive health outcomes (Brown, 2003; Tronick, 2005). In a longitudinal study of older couples, Brown (2003) found that those who provided tangible and/or emotional support reduced their risk of mortality by almost 50%. A recent meta-analysis also supported the relationship between perception of social support and wellbeing (Chu, Saucier, & Hafner, 2013). Combined with other research aimed at increasing wellbeing, the evidence seems strong that those receiving social support experience increased wellbeing throughout the lifespan (e.g., Abby, Abramis, & Caplan, 1985; Chu, Saucier, & Hafner, 2013; Cohen, 2004).

### **Disconnection from Others**

In theory, disconnection should involve a lack of these factors listed above (i.e., the opposite of connection). However, as is the case with positive and negative affect (Watson, Clark, & Tellegen, 1984; 1988) and approach/avoidance tendencies (Carver, & White, 1994), we propose that connection and disconnection are orthogonal constructs that independently affect a variety of outcomes. For example, disconnection from others, often operationalized as loneliness or social isolation, has some of the same neurobiological underpinnings as physical pain and can impact both physical and emotional health (Eisenberger, 2011). Disconnection from others also often results in poorer health, adjustment, and wellbeing outcomes (Baumeister & Leary 1995).

Without connection to others, infants and toddlers become distressed, and in extreme circumstances, can develop physical and mental disorders due to a lack of human connection (Tronick, 2005). In older adults, feelings of loneliness or disconnection from friends and neighbors lead to decreased morale (Lee & Ishii-Kuntz, 1987). Furthermore, a meta-analysis found that humans, when faced with rejection, will prioritize gaining back control of a situation, even if that means acting anti-socially (Gerber & Wheeler, 2009). In fact, Levula, Wilson and Harré (2016) assert that social isolation is the biggest predictor of mental health outcomes across the lifespan. Clearly, disconnection from others is a negative experience in people's lives and leads to several negative outcomes. It also appears that these outcomes are quite different from those resulting from connection to others.

### **Self-Connection**

There is a clear and meaningful distinction between the self and others (Vorauer & Kumhyr, 2001). In general, people respond differently to the same stimuli simply based on their current frame of reference (Junghaenel et al., 2018). Consequently, self-other ratings are often different simply due to whether the respondent is looking internally or externally (Atwater & Yammarino, 1997). Biological research also suggests that distinct parts of the brain activate depending on whom one is currently focused (David et al., 2006). Therefore, at least for people with an independent self-construal — as is common in Western societies — the results of focusing on oneself versus others should differ significantly (Markus & Kitayama, 1991). This highlights the importance of looking at connection and disconnection as they refer to the self in addition to connection and disconnection from others.

Past research has discussed self-connection as a combination of three components: (1) awareness of oneself; (2) acceptance of oneself based on this awareness; and (3) alignment of one's behavior with this awareness (see Klussman, Nichols, et al., 2020a). Awareness of the self can be thought of as understanding how one feels, thinks, and behaves, and what one's values, goals, and priorities are. Self-acceptance is an unconditional acceptance of these things one knows about the self. Self-alignment occurs when there is congruence between one's internal self and external behaviors. To date, research supports the relationship between self-connection and wellbeing (Klussman, Curtin, et al., 2020; Klussman, Nichols, et al., 2020a; 2020b).

Recent research supports this conceptualization and suggests that it is related to, but distinct from, popular psychological concepts such as mindfulness and authenticity (Klussman, Nichols, et al., 2020a). However, whereas mindfulness is often characterized as the non-judgmental awareness of one's internal states and experiences (Bishop et al., 2004; Carlson, 2013), and authenticity as consistency between what others think of a person and his/her behavior (Barrett-Lennard, 1998), self-connection uniquely requires awareness and acceptance of the self combined with acting in alignment with that self. Without the acceptance of the self, one can be aware of who one is and act in alignment with that but continue to feel dissatisfied with one's existence (Klussman, Nichols, et al., 2020a).

### Self-Disconnection

Research has indicated that self-alienation is associated with mental distress and other negative wellbeing outcomes (Wood, Linley, Maltby, Baliousis, & Joseph, 2008) and produces feelings of discomfort and disconnection (Burks, & Robbins, 2012). In particular, self-disconnection has recently been operationalized as a lack of at least one of the three components described above, i.e., self-awareness, self-acceptance, and/or self-alignment (Klussman, Langer, Nichols, & Curtin, 2020a; 2020b). Preliminary qualitative evidence highlights the ease with which even self-proclaimed self-connected people experience times of self-disconnection and the psychological distress that accompanies it (Klussman, Langer, et al., 2020a). This research also suggests that being disconnected from the self is a relatively common experience, even among those who are highly self-connected (Klussman, Langer, et al., 2020a; 2020b). Despite this, relatively few studies have examined the impact of being self-disconnected.

The first component is lacking self-awareness. People often struggle with understanding how and why they make the decisions they do (Hofree & Winkielman, 2012; Vazire & Carlson, 2010). Research shows that humans lack insight into how they feel and that introspection often leads to incorrect conclusions (Wilson, 2004). In many instances, others are more adept at predicting how we will react than we ourselves are (Vazire & Mehl, 2008; Vazire, 2010). Although not much is known about the effects of this lack of self-awareness, recent research suggests negative effects for personality development (Sheldon, 2014).

Lacking self-acceptance has also received relatively little consideration in the literature. However, one can conceptualize this as similar to self-hatred, at its most extreme. In addition, the combination of being highly unaware and unaccepting may be thought of as similar to symptoms of dissociation thus resulting in a host of negative outcomes (Edge, 2004; Serlin, 2011). Finally, researchers have found that, when one's behavior does not align with one's internal selves, the result is an experience of mental distress and discomfort (Burks & Robbins, 2012; Wood et al., 2008). This may stem from the earliest theories of cognitive dissonance and lead to many negative internal outcomes (Festinger, 1962).

## **Current Research**

In all, while researchers have independently examined the concepts of self and other connection and disconnection, to varying degrees, researchers have not yet examined these concepts together as they relate to mental health and wellbeing. The current research sought to expand our knowledge of connection by examining self-connection and other-connection along with their disconnection counterparts. In particular, we sought to understand how these various constructs affect both mental health and wellbeing. Regarding mental health, we examined anxiety and depression, both being factors that relate to connection and which should, therefore, be important for other forms of connection and disconnection (Kawachi & Berkman, 2001; Klussman, Nichols, et al., 2020b).

Due to the consistent support for relationships between connection and wellbeing, we also examined flourishing and life satisfaction as outcomes. Of note, these represent distinct types of wellbeing—eudaimonia and hedonia, respectively (Disabato, Goodman, Kashdan, Short & Jarden, 2016). In addition to representing overall wellbeing, these constructs also relate to various other positive outcomes. For example, Strine and colleagues (2008) found that increased life satisfaction was associated with decreased health risk factors, such as smoking and heavy drinking, and increased health related quality of life. Similarly, Keyes (2007) found that increased flourishing was associated with increased psychological and physical health. Therefore, it is safe to say that both forms of wellbeing are important and have implications for various aspects of a person's overall health.

In all, this study seeks to understand if there are relationships between self- and other-(dis)connection, wellbeing, and mental health. We predicted that an increased experience of both self- and other-connection would result in more positive and less negative outcomes, while an increased experience of the equivalent forms of disconnection would result in less positive and more negative outcomes. Although we did not have any guidance to hypothesize how the effects of each experience would differ, we expected that the effects of connection and disconnection would be independent from each other.

## **Study 1**

Study 1 aimed to understand how self and other connection and disconnection relates to mental health outcomes, including depression and anxiety. To examine our hypotheses, we recruited a convenience sample and asked them to report on their experience of each form of (dis)connection, followed by having them complete measures aimed at understanding their current mental health.

## **Method**

### **Participants**

Through personal contacts of those working in our lab, we recruited a total of 50 participants who completed the entire online questionnaire. On average, participants were 33.38 years old ( $sd = 12.35$ ), mostly White/Caucasian (78%), female (78%) and living in urban areas (56%).

### **Procedure**

Once participants signed up and provided informed consent, they completed our online questionnaire. As part of the main task of the study, we asked participants to list up to 20 words or phrases that come to mind when they think of being self-connected, other-connected, self-disconnected, and other-disconnected. For self-connection, we provided the following instructions, "Please list the words or phrases that come to mind when you reflect on what it means, or feels like, to be connected to yourself." To do so, they filled in up to 20 boxes following the question, "When I

experience deep connection to myself, I am or I experience: . . . ”. Similarly, to measure other-connection, we provided these instructions, “Please list the words or phrases that come to mind when you reflect on what it means, or feels like, to be deeply connected to other people.” and participants answered this question, “When I am deeply connected to other people, I am or I experience: . . . ”. Participants then turned to disconnection, again reporting up to 20 words or phrases for both self-disconnection and other-disconnection. Specifically, “deeply connected” was replaced with “disconnected” in the above instructions and questions.

Following this task, participants answered a variety of questions, including those related to both anxiety and depression. We assessed anxiety and depression using the four-item version of Kroenke, Spitzer, and Williams’ Patient Health Questionnaire for Depression and Anxiety (PHQ-4; 2001). Participants rated each item — two for anxiety and two for depression — on a four-point scale (e.g., “Feeling nervous anxious or on edge”: 1 = *not at all*; 4 = *nearly every day*). Higher scores reflect higher levels of depression or anxiety respectively ( $M_{Anxiety} = 1.88$ ,  $sd_{Anxiety} = 1.51$ ,  $\alpha_{Anxiety} = .81$ ;  $M_{Depression} = 1.38$ ,  $sd_{Depression} = 1.68$ ,  $\alpha_{Depression} = .88$ ). Participants then answered demographic questions.

## Results

We began our analysis by creating our connection and disconnection-related variables from the task participants completed. To calculate our measure of self-connection, we examined the self-connection task and counted the number of boxes in which participants entered a word or phrase ( $M = 6.22$ ,  $sd = 4.41$ ). We then did the same thing for self-disconnection ( $M = 5.34$ ,  $sd = 4.36$ ), other-connection ( $M = 7.80$ ,  $sd = 4.78$ ), and other-disconnection ( $M = 6.94$ ,  $sd = 4.33$ ). As conceptualized, these numbers represent the degree to which participants experience each construct.

We next performed four linear regression analyses—one for each type of (dis)connection (i.e., self or other) on each dependent variable (i.e., anxiety or depression). We first regressed anxiety simultaneously on self-connection and self-disconnection. Neither connection to self ( $\beta = -.30$ ,  $p = .33$ ) nor disconnection from self ( $\beta = .13$ ,  $p = .68$ ) resulted in a significant relationship with anxiety. By contrast, a similar regression with other-connection and other-disconnection, entered simultaneously, resulted in a significant effect of connection to others ( $\beta = -.62$ ,  $p = .02$ ) but not disconnection from others ( $\beta = .31$ ,  $p = .22$ ). A similar set of analyses resulted in almost identical effects on depression. The only significant effect was that of connection to others ( $\beta = -.54$ ,  $p = .04$ ). All other effects were nonsignificant (all  $\beta$ s < .42,  $p$ s > .11).

## Discussion

Findings from Study 1 suggest that neither one’s connection to oneself, disconnection from oneself, nor one’s disconnection from others, seem to relate to levels of anxiety or depression. However, the more that participants experienced connection to others, the lower their ratings of anxiety and depression. That is, it seems that an increased experience of connection to others uniquely relates to decreases in both anxiety and depression. However, self-connection did not appear to affect these negative mental health outcomes. Similarly, disconnection from oneself nor from others related to anxiety or depression. In all, this suggests that one’s mental health is most benefited from experiencing connection to others. We further explore these effects in the context of wellbeing next.

## Study 2

Study 1 suggested that only connection to others relates significantly to a person’s mental health. To further examine our hypotheses, Study 2 sought to extend these findings to a person’s overall



wellbeing. Using a similar procedure, we recruited an online sample of participants and examined how (dis)connection related to their flourishing and life-satisfaction. Overall, we sought to understand how self and other (dis)connection affects aspects of wellbeing and if these effects are distinct for each form of (dis)connection.

## Method

### Participants

We recruited US residents from Amazon's Mechanical Turk. A total of 101 participants completed the entire online questionnaire. On average, participants were 35.05 years old ( $sd = 9.91$ ), mostly White/Caucasian (81%), female (55%), and living in suburban areas (55%).

### Procedure

The procedure was almost identical to that in Study 1. Once participants signed up and provided informed consent, they completed the online questionnaire. Participants first listed up to 20 words or phrases that come to mind when they think of being self-connected, other-connected, self-disconnected, and other-disconnected. Following this task, participants answered a variety of questions, including those related to wellbeing. Following these measures, participants answered demographic questions.

### Measures

**Flourishing.** We used Diener and colleagues' (2010) flourishing scale as our indicator of eudaimonic wellbeing. Participants rated how much they agreed with seven statements on a seven-point scale (e.g., "I am a good person and live a good life": 1 = *strongly disagree*; 7 = *strongly agree*). The original scale has 8 items, but one item ("People respect me") was left out of our survey due to a transcription error. Higher scores indicated greater flourishing ( $M = 5.13$ ,  $sd = 1.41$ ,  $\alpha = .96$ ).

**Life Satisfaction.** We measured life satisfaction, as our indicator of hedonic wellbeing, with the single-item measure validated by Cheung and Lucas (2014). It asks participants to respond to the following question on a four-point scale, "In general, how satisfied are you with your life?" (1 = *very satisfied*; 4 = *very dissatisfied*). We reverse-coded the item so that higher values represented higher life satisfaction ( $M = 2.79$ ,  $sd = 0.92$ ).

## Results

Similar to Study 1, we first computed our connection and disconnection-related variables. To calculate our measure of self-connection, we examined the self-connection task and counted the number of boxes in which participants entered a word or phrase ( $M = 5.69$ ,  $sd = 3.25$ ). We then did the same thing for self-disconnection ( $M = 4.74$ ,  $sd = 2.87$ ), other-connection ( $M = 7.17$ ,  $sd = 3.41$ ), and other-disconnection ( $M = 5.30$ ,  $sd = 2.66$ ).

We next performed linear regression analyses for each type of (dis)connection (i.e., self or other) on each dependent variable (i.e., flourishing or life satisfaction). When entered as simultaneous predictors, neither connection to self ( $\beta = .06$ ,  $p = .62$ ) nor disconnection from self ( $\beta = -.21$ ,  $p = .10$ ) significantly predicted flourishing. By contrast, a similar regression with other-connection and other-disconnection, entered simultaneously, resulted in significant effects of both connection to others ( $\beta = .29$ ,  $p = .05$ ) and disconnection from others ( $\beta = -.41$ ,  $p < .01$ ).

A similar set of analyses examined these effects on life satisfaction. Although connection to oneself did not seem to predict life satisfaction ( $\beta = .13$ ,  $p = .29$ ), one's experience of disconnection from oneself did ( $\beta = -.34$ ,  $p < .01$ ). Similarly, disconnection from others significantly predicted lower life satisfaction ( $\beta = -.34$ ,  $p = .02$ ) while connection to others did not ( $\beta = .20$ ,  $p = .18$ ).

## **Discussion**

The results of Study 2 suggest that it is one's experience of connection to and disconnection from others that most strongly relates to flourishing. The experience of self-connection and disconnection did not seem to relate to levels of flourishing. By contrast, it appeared that disconnection was the key to understanding a person's life satisfaction. Both self- and other-disconnection related to lower life satisfaction. As predicted, this suggests that connection and disconnection are independent concepts that result in different outcomes. Furthermore, being connected or disconnected from the self versus from others is experienced differently and uniquely impacts aspects of one's wellbeing.

### **General Discussion**

The purpose of the current research was to examine how the experience of connection and disconnection affects one's mental health and wellbeing. Further, we wanted to understand how disconnection from self differs from disconnection from others in predicting these outcomes. To this end, we conducted two studies, one focusing on mental health and one on positive wellbeing, to determine how (dis)connection manifests in these ways. Study 1 suggested that it is experiencing connection to others that matters most to mental health, and that people who experience more other-connection are less anxious and depressed. Study 2 similarly found that an increased experience of connection to others increased eudaimonic wellbeing (i.e., flourishing). Uniquely, self-disconnection also related significantly to flourishing. Furthermore, only disconnection from self and others, and not connection, related to hedonic wellbeing (i.e., life satisfaction).

### **Implications**

Our results suggest differing avenues for increasing distinct types of mental health and wellbeing. Researchers and practitioners alike may best promote mental health by finding ways to increase social support. Hedonic wellbeing may, on the other hand, show the greatest improvement by developing ways of decreasing both self- and other-disconnection. Finally, people may best address eudaimonic wellbeing by increasing connection to others and decreasing disconnection from oneself. With this in mind, future studies should investigate how to diminish both self- and other-disconnection in ways that uniquely address both health and wellbeing, while increasing other connection to increase mental health.

In all, it appears that connecting with oneself and others, while avoiding disconnection from each, is vital to a happy, healthy life. Past research has already examined the relationship between self and other connection and various health and wellbeing indicators (Kawachi & Berkman, 2001; Klussman, Nichols, et al., 2020b). The current research is some of the first to extend the idea of connection to disconnection from both self and others. Our findings suggest that self and other connection and disconnection may be distinct processes affecting health and wellbeing. Much like the study of positive and negative affect (Watson et al., 1988), connection and disconnection may be thought of as orthogonal constructs that share similarities but are importantly distinct processes with separate predictors and outcomes. This research, therefore, provides initial evidence that both connection to and disconnection from oneself and others are important, distinct, and require further investigation. Given the large effect sizes resulting from the current research, this is likely to be a promising avenue for future research (Geerling & Diener, 2018).

One especially promising implication can be applied to both a personal improvement practice as well as in clinical settings. In both contexts, it is valuable to understand what forms of connection or disconnection may lead to the desired mental health or wellbeing outcomes. For

example, if people desire improvement in life satisfaction, they can focus on ways to decrease the disconnection they experience from themselves and others and engage in actions that will ideally decrease this disconnection. Likewise, clinicians could help patients through this process by identifying the cause(s) of that disconnection and working with the patient to both internally and externally reduce it. However, if increased mental health is the goal, one should focus on increasing connection to others. In this case, clinicians would want to identify ways to help patients connect with others and help them through that process.

### **Limitations and Future Research**

One limitation of the current study was its cross-sectional nature. Instead of manipulating who completed which task or priming them with one form of (dis)connection, we simply asked all participants, in both studies, to report on their experience of all four types of connection and disconnection. The resulting data were correlational in nature. Additionally, the samples were demographically similar and relatively small. Future research would be wise to use larger, diverse samples and experimental designs to further examine these relationships and to determine if, in fact, it is (dis)connection that causes these outcomes or if these “outcomes” result in (dis)connection.

Once researchers have confidence in the directionality and strength of these relationships, future research is needed to find ways to increase connection and decrease disconnection. One way that practitioners may promote these types of connection and avoid disconnection could be the well-researched modality of daily diaries, as these can help people to reflect on moments of connection and disconnection in their daily lives and promote intentional change (Ullrich, & Lutgendorf, 2002; Miller, 2014). Another potentially interesting intervention, targeting both self and other connection, would be the use of group meditation. Doing this in a group setting that fosters discussion of participants “true selves” and promotes intentional change would reflect what many therapeutic groups aim to accomplish and may reap the same benefits of connection (Huntly, Araya, & Salisbury, 2012; Sloan, Feinstein, Gallagher, Beck, & Keane, 2013). Future research should also consider the finding that other-connection may be beneficial for health outcomes, especially since this has long been supported by previous research (Brown, 2003; Tronick, 2005; Eisenberger, 2011). The development of interventions promoting other-connection and social support can further increase people’s health while decreasing the risk of negative health outcomes.

Another interesting line of research would be to study the interactions between perceptions of connection to others and connection to the self. Does the increase of one increase the perception of the other? Is there a relationship between those who perceive themselves as self-connected and their perceptions of connections to others? Does increasing one form of connection or disconnection affect the other forms of (dis)connection? The answers to these questions will likely help guide research and practice in this area, and are among just some of the many avenues that future research may pursue.

Importantly, disconnection appears to predict distinct outcomes from connection. Research should more thoroughly investigate the effects of self and other disconnection to identify ways people might also avoid experiences of disconnection. Previous research has qualitatively examined what prevents people from connecting to themselves (Klussman, Langer, et al., 2020b) and to others (Smyth, Harries, & Dorer, 2011), finding both internal and external barriers. It would be beneficial to examine these findings together to see if the overlap provides a point of intervention that would allow practitioners to simultaneously decrease both self and other disconnection.



Finally, future development of the measurement of these concepts is important. This study measured connection and disconnection by asking participants to list words that represented their experience of feeling connected or disconnected from themselves and others. We then summed these and used them in our analyses to represent connection and disconnection scores. Future research would benefit from validated measures of connection and disconnection for both the self and others. Research into other-connection has often used scales such as the Social Provisions Scale (Cutrona, & Russell, 1987) and the Norbeck Social Support Questionnaire (Norbeck, Lindsey, & Carrieri, 1983). Similarly, the UCLA Loneliness Questionnaire is a common and validated measure of disconnection from others (Russell, Peplau, & Ferguson, 1978). However, there is not yet a validated measure of self-connection or disconnection. As the present research suggests, connection and disconnection may be distinct constructs, so having measures of each construct would be useful for understanding and investigating these concepts further (Klussman, Nichols, et al., 2020a).

## Conclusion

The current research examined various forms of both connection and disconnection. Connection to others significantly predicted anxiety, depression, and flourishing. Similarly, those who experienced more disconnection from others had lower flourishing and life satisfaction while those experiencing more disconnection from themselves experienced lower life satisfaction. These results suggest that all forms of connection and disconnection are important and require further study. In all, it appears that simply being connected to oneself and others leads to important gains in both mental health and wellbeing.

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